

IN THE CLAIMS

Please change "Patent Claims" to ---What is claimed is:---

Please amend claims 1, 8, 9 and 14, as follows, with a marked-up copy of the amended claims being included in an Appendix attached to this amendment:

B⁶ 1. (Amended) A lithium intercalation compound containing lithium manganese oxide and having a spinel structure for thin-film electrodes, said lithium intercalation compound comprising:

- a specific surface area, determined by the BET method, of from 0.3 to 5 m²/g,
 - a particle size, determined from the d₅₀ value, of greater than 0.5 μm, and
 - a diameter, determined from the d₉₀ value, of 30 μm or less, and an internal pore volume of less than 0.05 ml/g and has a pronounced crystal structure.
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8. (Amended) A process for the preparation of a lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 1, by

- B⁷
- a) preparation of an intimate mixture of at least one lithium compound and at least one manganese compound, where at least one of these compounds or the sum of all compounds contains sufficient active oxygen that the number of equivalents of active oxygen is equal to or greater than the number of lithium atoms, and heating at from 600°C to 1000°C in a non-oxidizing atmosphere, followed by grinding, giving a particulate, crystalline spinel precursor compound; and
 - b) heating the crystalline spinel precursor compound in an oxidizing atmosphere at from 500°C to 800°C with a residence time of from 0.5 to 10 hours.

P21955.a03

9. (Amended) A process for the preparation of a lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 1, by

- B⁷
- a) a1) preparation of an intimate mixture of Li_2O_3 and Mn_3O_4 ,
 - a2) heating at from 600°C to 1000°C under a non-oxidizing atmosphere with a residence time of from 15 to 120 minutes in a rotary tube furnace,
 - a3) grinding the heated mixture to give a particulate, crystalline precursor compound; and
 - b) heating of the spinel precursor compound in an oxidizing atmosphere at from 500°C to 800°C with a residence time of from 0.5 to 10 hours.
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14. (Amended) A process as claimed in claim 8, where, after the heating in an oxidizing atmosphere, the resultant solid is suspended in water with addition of at least one alkaline lithium compound, and the suspension is spray-dried at a temperature of from 100°C to 400°C .

Please add claims 21-29, as follows:

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---21. A lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 2, where the specific BET surface area is from 0.5 to $1.9 \text{ m}^2/\text{g}$.

22. A lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 2, where the specific BET surface area is from 0.6 to $1.5 \text{ m}^2/\text{g}$.

23. A lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 2, where the particle size, determined from the d_{50} value, is greater than $1 \mu\text{m}$.

P21955.a03

24. A lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 3, where the particle size, determined from the d_{50} value, is greater than $1\ \mu\text{m}$.

25. A lithium intercalation compound having a spinel structure and containing lithium manganese oxide as claimed in claim 2, where the diameter, determined from the d_{90} value, is less than $25\ \mu\text{m}$.

26. A lithium intercalation compound having a spinel structure and containing lithium manganese oxide as claimed in claim 3, where the diameter, determined from the d_{90} value, is less than $25\ \mu\text{m}$.

27. A lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 2, where the diameter, determined from the d_{90} value, is less than $20\ \mu\text{m}$.

28. A lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 3, where the diameter, determined from the d_{90} value, is less than $20\ \mu\text{m}$.

29. A process for the preparation of a lithium intercalation compound containing lithium manganese oxide and having a spinel structure as claimed in claim 9, where the non-oxidizing atmosphere comprises nitrogen or argon.---

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9